Lice on horses

Robert Wright

Lice on horses in Ontario are not common, but questions arise about treatment. Both sucking and biting lice can affect horses. The chewing louse, *Bovicola equi,* feeds off tissue and cells sloughed from the surface of the skin. The sucking louse of horses, *Haematopinus asini,* feeds off blood. The species of lice is important, since it is easier to kill sucking lice than biting lice with a systemic insecticide. Lice cause intense pruritus around the base of the tail, the head, and the mane. Horses will rub themselves raw.

Lice are normally species-specific. However, the chewing lice of poultry can also affect horses when poultry and horses are housed together. The horses should be removed from the building. If the poultry is removed, the lice will continue to harass the horses, unless the premises receive a good cleanup and insecticide treatment.

Lice and their life cycle

Life cycle

Lice undergo a simple life cycle. They transform from egg to nymph to adult, with the entire cycle being completed on the host.

The ***chewing louse*** is about 1/10 of an inch long, chestnut brown, with a yellow abdomen with dark cross bands. It is flat with a broad, rounded head and slender legs. The eggs are attached to the hair and hatch in 5 to 10 d. Nymphs immediately start feeding and mature in 3 to 4 wk.

The ***sucking louse*** is about 1/8 of an inch long and dirty grey. It has a broad abdomen that contrasts with the long narrow head. Sucking lice are more common and more irritating than are chewing lice. They have piercing mouth parts. When present in large numbers, they can cause anemia. The eggs are attached to the hair and hatch in 11 to 20 d. Nymphs begin sucking blood immediately. They complete their life cycle in 2 to 4 wk.

Control and treatment

Transmission of lice is by direct contact between horses and through contact with infected brushes, blankets, and tack. Successful control requires that equipment is cleaned thoroughly with the same insecticide as used on the horses. The cleaning should be repeated in 2 wk. Sterilization of equipment by boiling will also kill the lice, nymphs, and eggs, as will placing blankets and coolers in the drier at the highest heat setting.

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Powders

The only approved products for the treatment of horses with lice are the powder products containing carbaryl (Sevin, Rhône Mérieux Canada, Victoriaville, Québec; Dusting powder, Dominion Veterinary Laboratories, Winnipeg, Manitoba). All other products are used in an off-label or extra-label manner, and the veterinarian is required to relabel the product, providing directions for use (the route of administration and frequency, as well as human and animal precautions associated with the product).

Powders should be used by dusting the entire animal and ensuring that the dust reaches the skin. It is difficult to get the powder down to the skin when animals have a long winter coat. Wetable powders are intended to be mixed with water and applied to improve contact with the skin. Powders may contain any of several chemicals, including rotenone, coumaphos, carbaryl, and fenthion.

Systemic treatments

Systemic treatments, such as the avermectins, are not approved for treatment of lice on horses. Systemic products usually come as a pour-on or an injectable. Care must be taken before contemplating the use of a pour-on form, since the carrier base (alcohol) may cause a local skin reaction. The injectable form may possibly be used PO for sucking lice treatment, but no research has been reported (Knight P, Pfizer Animal Health, personal communication).

Pour-ons

Nonsystemic, pour-on insecticides containing permethrin can be used to control lice. A 4% solution is recommended when treating donkeys with lice (1). A 1% solution was very effective in controlling lice in cattle, and a 0.1% solution was effective against chorioptic mange in cattle (Heal J, University of Guelph, personal communication). It may be possible to use a 0.1% solution for biting lice on horses and reduce the potential for skin reactions, which are sometimes seen with a 1% permethrin solution (Heal J, personal communication). The permethrin solution should be applied along the back and down the face. Two treatments, 14 d apart, are recommended for the optimum control of lice.

The following products contain permethrin at the stated concentration: Coopers Delice Pour-in 1%, Mallinkrodt, Ajax, Ontario; Disvap Equine 0.1%, Vétoquinol Canada (Dispar), Joliette, Québec; Nix Cream Rinse 1%, Warner-Lambert, Scarborough, Ontario; Siecon 0.5%, Davis & Lawrence, Cambridge, Ontario; Vetolice 1%, Vétoquinol Canada (Dispar).

These can be diluted, as necessary, to get a 0.1% solution (Heal J, personal communication). Some of these products have an oil-based carrier and will create a mess if the horse rolls in a sandy arena. Siecon and Disvap-Equine are labeled for use for flies on horses.

Shampoos

A shampoo containing 1% selenium sulphide (Seleen, Sanofi Animal Health, Victoriaville, Québec), has been reported as being successful in treating lice on horses (2). It is also approved for the treatment of seborrhea in small animals. The 1% selenium sulphide has antiparasitic action. Whole-body bathing of horses with selenium sulphide 3 times at 10 d intervals was successful in treating lice. Treatment consisted of using the following amounts of selenium sulphide 1%: ponies — 150 mL; horses up to 500 kg body weight (BW) — 300 mL; and horses greater than 500 kg BW — 450 mL (2). ***Choice of treatment will vary depending on time of year, ambient temperature, and the number of horses being treated.***

References

1. Svendsen ED. The Professional Handbook of the Donkey, 3rd ed. London: Whittet Books, 1997.
2. Paterson S, Orrel S. Treatment of biting lice in horses using selenium sulphide. Equine Vet Educ 1995; 11: 11–28.

BOOK REVIEW

COMPTE RENDU DE LIVRE

Orsini JA, Divers TJ. ***Manual of Equine Emergencies.*** WB Saunders, Philadelphia, Pennsylvania, 1998. 759 pp. 0-7216-2425-1. $82.95 US.

This is an excellent comprehensive handbook on the treatment of equine emergencies that will be extremely useful to the practising veterinarian, the new graduate, veterinary students, and even veterinary specialists when they are carrying out procedures outside their specialty area. The editors have achieved their goal of providing the most up-to-date information on current diagnostics and therapeutics in equine emergency medicine. The manual is a thorough resource for work-up and treatment of equine emergencies.

The information from 22 contributors is well organized into major sections with appropriate subheadings, making it easy to find pertinent information quickly. For example, Part 1: General Diagnostic and Therapeutic Procedures includes sections 1–7 covering a variety of common (blood collection) and uncommon (intraosseous infusion) procedures. Diagnostic procedures are described completely, but simply, and include diagrams that make the instructions easy to follow for new graduates or others who have not previously conducted the procedure.

Footnotes, including the manufacturer's name and phone number, make it simple to order the required equipment. Physical examination methodology, diagnostic procedures, interpretation of results, treatment options, and adverse effects of treatments are included in each section on various body systems. Appropriate space is allotted for both adult and neonatal medicine. Along with more basic information and methods for common procedures, the manual includes atypical sections that include uncommon procedures.

A novel chapter called Management of Special Problems was especially interesting. It includes sections on disaster medicine, anesthesia and resuscitative drugs for field emergencies, and nutritional guidelines for a variety of conditions. Aside from being interesting, it includes valuable information for the practitioner dealing with a variety of emergencies. The Disaster Medicine section has multiple lists that can be used by individual veterinarians or groups of veterinarians to organize supplies and personnel into teams for dealing with situations that may otherwise result in animals being destroyed.

The Pharmacology and Toxicology sections also have much to offer, including the readily accessible Tables of Acute Drug Reactions and Recommended Treatments. The Toxicology section has a listing of diagnostic laboratories around the United States and telephone listings for the National Animal Poison Control Center. It also has diagrams of poisonous plants. Since the manual is small and light, it is handy for use in the field when exploring for poisonous plants. Its size is also conducive to it being carried in the ambulatory truck or being stored in the crash cart of most private practices, where it will be most valuable. The appendices are important and helpful, providing easily accessible basic and critical information, such as anthelmintic medication recommendations, vaccination schedules, and emergency drug dosages. I appreciated the list of product manufacturers and registry information for various breeds, which will save time for many veterinarians. A list of veterinary hotlines on the back of the front cover is readily accessible. This manual will be an asset to the practitioner and will be a valuable addition to the clinic or ambulatory truck.

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